

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
4 March 2004 (04.03.2004)

PCT

(10) International Publication Number  
**WO 2004/018593 A1**

(51) International Patent Classification<sup>7</sup>: **C10L 1/30**

(74) Agent: KOREANA PATENT FIRM; Dong-kyong Bldg.,  
824-19, Yoksam-dong, Kangnam-ku, Seoul 135-080 (KR).

(21) International Application Number:  
PCT/KR2003/001692

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 22 August 2003 (22.08.2003)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:  
10-2002-0049837 22 August 2002 (22.08.2002) KR

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*):  
SAINTCROSS CO., LTD. [KR/KR]; 4F Coreal Bldg  
190-5 Bangyee-Dong, Songpa-Gu, Seoul 138-050 (KR).

(72) Inventors; and

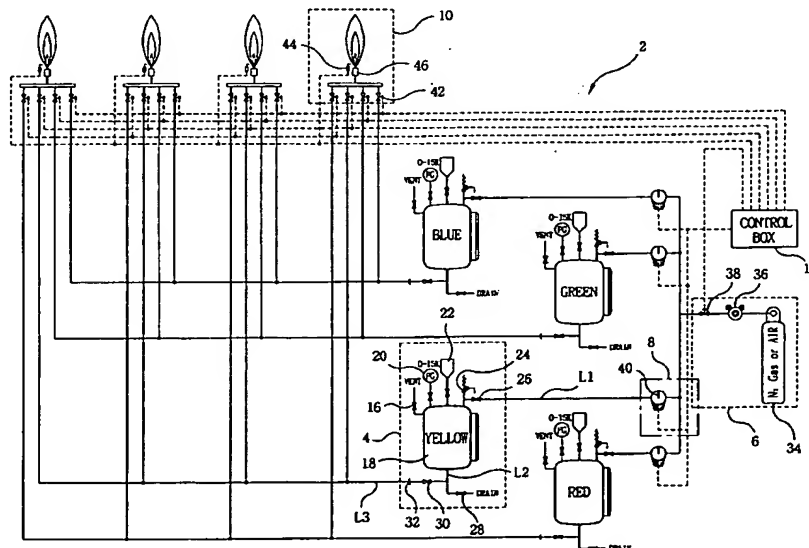
(75) Inventors/Applicants (*for US only*): KOH, SUN-HO  
[KR/KR]; 13Dong 705Ho Wosung APT, Gamsil 7Dong,  
Songpa-gu, Seoul 138-798 (KR). IM, JIN-MAN  
[KR/KR]; 102Dong 702Ho Kumho Best Vill, 157  
Bangi-Dong, Songpa-Gu, Seoul 138-050 (KR).

Published:

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: A FUEL COMPOSITION AND A DEVICE FOR COLORED FLAMES



(57) **Abstract:** The present invention is related to a fuel composition for colored flames and an appropriate combustion device for using such composition which provides a fuel composition for colored flames with improved inflammability, realization of colored flames and persistency by having alcohol of low ignition point as a fuel, by adding a compound having an ester structure and by adding a fire power enhancer including at least 3 higher hydrocarbon. Also, the present invention provides a combustion device wherein the fuel composition is injected in fog so as to enhance ignition power when rendering colored flames by injecting through an injection nozzle and igniting, the size of flames can be controlled by adjusting pressure, and color of the flames injected through each injection nozzle portion can be realized in different colors respectively by a control device.

WO 2004/018593 A1